

Comments on the Proposed Alternative: Mid-Channel Diversion

Department of Water Resources

Division of Planning and Local Assistance

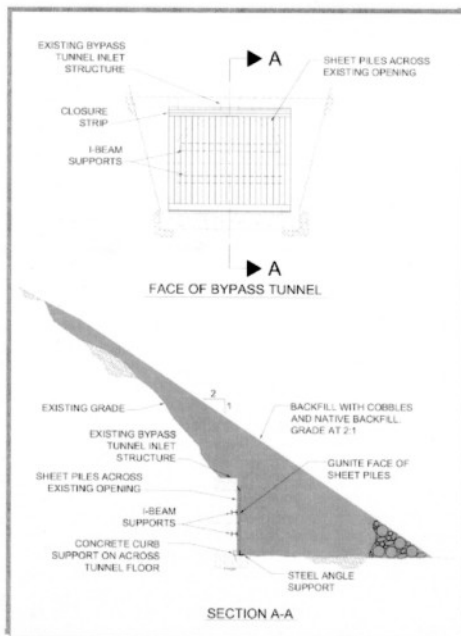
Section 3.13, Geology and Soils, identifies the potential for increased erosion due to the highly disturbed nature of the project site and construction activities associated with the Proposed Project. The long-term viability of the pump station and related facilities due to soil and geologic site conditions has been identified as a concern by Placer County Water Agency and the Bureau of Reclamation. The Geology and Soils section recommends several environmental protection and mitigation measures to improve slope stability. Recommendation 2 "Grading to and acceptable stable topographic configuration by terracing, reducing slope angles, and reducing the height of cut and fill slopes." dovetails nicely with several permanent BMP's design concepts typical of post-construction SWPPP's. This recommendation needs to be carried forward and implemented into the final design of the project.

Bypass Tunnel Closure:

The Proposed Alternative is recommending the closure of the existing bypass tunnel "by placing sheet piles, sheet plates, reinforced concrete, and large rock across the face of both the inlet and outlet" (pg. 2-21) as illustrated by the adjacent graphic from the public workshop presentation.

As currently proposed, the bypass tunnel closure concept raises some potential concerns:

1. The stability and reliability of the 2:1 engineered fill slopes covering the closures during a 1% probability event (100-yr. storm).
2. The structural integrity of the sheet pile/sheet plate/reinforced concrete pipe closure under flood and soil loading. Most tunnel closures involve construction of a concrete plug at least two (2) times the length of the tunnel's diameter. The sheet pile/soil backfill closure does not appear to be a structurally positive plan.



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C. These measures are part of the Mitigation Plan.

D. As described in the Draft EIS/EIR, page 2-21, the bypass tunnel closure design will allow for reopening the tunnel in the event that Auburn Dam is reauthorized. As part of the 1997 Value Planning Study, alternative ways for preventing boaters and swimmers from entering the tunnel, or being impinged on screens, were evaluated with and without restoring the river channel. It was concluded that there is no safe way of accomplishing this without directing the water around the tunnel. The Proposed Project represents a design that protects boaters and swimmers while providing a "temporary" closure of the tunnel. Filling the tunnel, or installing a concrete plug would accomplish the safety objectives, but would make it more difficult to reopen the tunnel at a later date, if needed.

The lead agencies recognize concerns regarding the permanency and specifications of the tunnel closure. The tunnel closure, as designed, entails placing sheet piles at the tunnel inlet and outlet. The sheet piles would be covered with shotcrete (Gunite) and covered with a stable engineered fill. This method of closing the existing tunnel will be permanent (i.e., will not require replacement) but would allow re-opening of the tunnel in the event that a diversion tunnel is needed in the future. Completely filling the existing tunnel with grout or earth would preclude future access (except via excavation), and would require approximately 84,000 cubic yards of material. Although the tunnel will not be filled in completely as designed, there would be no danger of caving in because the tunnel passes through rock and is lined with structural grade concrete.

Concerns over water permeating the engineered fill and sheet piles at the tunnel inlet or outlet have been noted. While water entering the tunnel is not likely to occur under current design specifications, the design could be augmented by using an impermeable membrane incorporated between two layers of Gunite, in place of the single layer of Gunite. A reinforced concrete wall could also be constructed against the sheet piles.

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3. The necessity of the engineered backfill cover over the bypass tunnel closure.
4. The piping failure of the backfill into the tunnel through the sheet pipe in a large event.
5. The eventual corrosion failure of the steel sheet piles and reinforcing members.

Visual Resources:

Chapter 2, Section 2.2.2 makes several references concerning the "look" of the project or how it should fit into the landscape as noted below:

1. Diversion/Intake Structures (pg. 2-20):
 - "The structures would be constructed from a combination of boulders, grouted rock (possible including cofferdam remnant materials), and possibly faux rock (concrete or other substance molded to look like natural rock formation)."
2. River Channel Restoration (pg. 2-21):
 - "Restoration of dewatered channel to appear and function like a natural river environment" with attached caveat,
 - "Further enhancement of fish and wildlife habitat would occur over time as the channel and the surrounding environment respond to the returned river flows."
3. Water Supply Diversion (pg. 2-21):
 - "The bypass tunnel closure would prevent access to the tunnel and would be designed to blend into the surrounding landscape."
4. Natural River System Functions (pg. 2-22):
 - "A key design goal for the restoration component of the Proposed Project is to imitate, to the extent possible, the appearance and form of a natural river channel, including the banks and floodplain benches."
 - "...design to accommodate anticipated natural processes and be visually and functionally compatible with the reaches up and downstream of the project site."

However, the Visual Resources discussion, Section 3.9, appears to focus on the facilities (pump station and other structures) associated with the project and their visual impact, not the entire project which includes extensive site re-grading and the restoration of natural flows through the river channel. The section does not address how the project will fit into the landscape nor offer recommendations relative to the integration of the project into the natural landscape, an important component of a visual quality/scenic resource impact (aesthetics) assessment.

The Visual Resource section identified two receptor groups as "valuing the scenic quality of their views integrally with their use of the area" (pg. 3-232), adjacent residents and recreationists. The recreationist group centered on those using the trail system adjacent to and/or traversing the project site, hikers, bikers, and horseback riders. The recreationist group should have been expanded to those who limit their activities to the river channel including casual hikers exploring the canyon floor and river banks, fishing enthusiasts, and the future boaters navigating the restored river channel. Their

- E. Overall, the Proposed Project, through restoration of the North Fork American River to the dewatered channel and creation of a naturally functioning river system would improve the existing visual resource conditions at the project site.

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perspective of the project site will be far more focused on adjacent landforms and the devastation associated with the Auburn Dam work and cofferdam breach.

E

Paragraph 3.9.2.3 states "There are no formal, specific regulations or criteria for analyzing visual resource impacts." There are at least two (2) recognized processes/procedures for assessing impacts on visual quality and scenic resources. Both of the processes are participatory by nature involving input from local communities, user groups, community leaders, and experts in the field visual impact assessment. The U.S. Forest Service has developed a very elaborate process for identifying, analyzing, categorizing, and managing the scenic resources and visual quality of National Forests. The process has been in place since the early seventies with the most recent version, "Landscape Aesthetics, A Handbook for Scenery Management" (Agricultural Handbook 701) being published December 1995. The Federal Highway Administration published a process for assessing visual impacts in 1981 entitled "Visual Impact Assessments for Highway Projects". All State DOTs receiving federal funding on highway improvement projects, where visual impacts have been identified as a potential environmental concern, use the process. While developed for highway improvement projects, FHWA's process is universal allowing its application on most any type of construction project.

The Visual Resource section fulfills the basic intent of the NEPA/CEQA process. An overall finding of "less than significant" visual quality/scenic resource impact is probably appropriate due to the extent of existing site disturbances. However, the discussion misses an opportunity to recommend how the more significant facets of the project, the finished appearance of the site mass grading and river restoration work, should fit into the natural landscape.

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NEPA directs federal agencies "to restore and enhance the human environment" to the fullest extent possible. The partial restoration of the river channel and canyon is a significant beneficial impact of this alternative. However, perfectly engineered 2:1 slopes are neither visually appealing nor "designed to blend with the surrounding landscape." A few recommendations focused on how to blend the site grading into the natural landscape would be appropriate.

Recommendations:

1. Implement slope stability Recommendation #2 as proposed in the Geology and Soils section (pg. 3-286). Recommendation 2 will:
 - greatly improve the changes for a successful re-vegetation program for the disturbed project site,
 - enhance the post-construction storm water pollution prevention plan by reducing the total disturbed area into a series of smaller, more manageable zones,
 - facilitate the monitoring and maintenance of the permanent BMP's, such as detention basins and sediment traps, by providing access routes via the terracing, and
 - provide a better fit of the project into the regional landscape.

F. Please refer to Master Response 3.1.5, Project Area River Restoration.

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2. Expand Recommendation #2 to include the following:
 - Include contour furrowing and/or slope roughening to reduce surface water velocities flowing down the face of slopes and increase water percolation rates.
 - Contour grade slopes at varying horizontal to vertical (h:v) ratios to better blend manufactured slopes into the natural terrain, and
 - Utilize channel linings or temporary structures in drainage channels to slow runoff velocities.
3. Implement biotechnical soil stabilization principals into the slope stabilization aspects of the project. The basic concept behind biotechnical soil stabilization is the integration of live vegetation with structural-mechanical methods (rip-rap, retaining structures, etc.) to reduce and/or prevent slope failure and erosion. Biotechnical soil stabilization methods may include vegetated rip-rap, brushlayering, willow wattles, pole planting, and live siltation to name a few. The vegetative aspect will enhance the structural-mechanical elements of the slope stabilization plan by increasing the strength and holding capacity of the structure while improving its aesthetics and better integrating it into the natural landscape.
4. Underground all new power-lines to comply with Placer County's Policy 1.K.5 (pg. 3-236). The project is located in a State recreation area where visual quality impacts can have a higher priority than in more developed areas. The introduction of visually intrusive manmade elements such as power poles and overhead wires into a natural setting should be avoided wherever possible. While the project site is highly disturbed now, the potential exists for restoring the area to some semblance of its original natural condition. The park's user groups and adjacent residents overlooking the project site may consider the power poles and overhead wires visually unacceptable.
5. Incorporate "context sensitive design" principals into the design of the pump station enclosure. A guiding principal of "context sensitive design" is to design the project to be in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area. As currently proposed, the sheet-metal pump station enclosure "painted a neutral/earthtone color" will be out of context with a park setting. A building design which reflects the cultural heritage and historical significant of Auburn would be more appropriate. If sensitively designed to fit the context of the park setting, screening the building may not be necessary or may be less extensive.
6. Rock netting, if used, should be color-coated to match the rock surfaces it is being secured to.
7. Stain/treat all newly exposed rock surfaces including rip-rap with "Permeon" of equal material to reduce glare generated by exposed rock surfaces and blend the rock into the surrounding landscape.

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8. Contour grade the remaining portion of the cofferdam to reduce its unnatural visual prominence in the landscape.
9. To the extent possible, backfill void spaces in rock fills and top-dress slope surfaces with alluvium material excavated from the river channel. A successful revegetation and erosion/sediment control plan will require a planting medium for the establishment of plant material.
10. In lieu of the proposed sheet pile/rock backfill bypass tunnel closure, consider plugging the tunnel with concrete and treating the surface with a sculpted rock texture emulating the adjacent exposed rock formation per attached photo-simulation. The concrete plug would insure a positive closure for the tunnel while allowing for its removal should the Auburn Dam be reauthorized. The faux rock treatment would conceal the plug to all but the very trained eye and would enhance the visual quality of the area.

L-250

1 November 2001

Box 2160
Nevada City, California 95959

I wish to comment on the issue of Placer County Water Authority and their claims of the necessity of closing down the Auburn to Cool trail in light of their attempt at river restoration.

I feel the Authority should most definitely be responsible for the construction of a bridge and should include that cost in their plans of this river restoration project. Whatever the cost, it is certainly the Authority's responsibility since it will keep the trail open as a multi-use trail which it currently is and should remain as one.

A The area is heavily utilized by many recreationists of all disciplines; hikers, joggers, bicyclists and of course, equestrians. None of those groups can afford to lose any trails in this area, or anywhere for that matter. While river restoration is of the utmost importance as well, the Authority can accomplish their goal of restoration as well as maintaining the integrity of the area for recreational pursuits.

Closing this area is definitely not an option as other nearby trails will become overburdened and crowded and are, in some locations, treacherous as well.

The wisest option to ultimately restore the river and maintain it's health as well as keeping the trails open is for a bridge to be constructed, which the PCWA should include in their plans. Additionally, the Authority should include trails along the roads they intend to asphalt so connecting trails are not lost through this project.

Thank you for your consideration.....

Nancy Neuman

A. Please refer to Master Response 3.1.1, Auburn-to-Cool Trail.

L-251



COMMENT CARD
PLACER COUNTY WATER AGENCY/U.S. BUREAU OF RECLAMATION
PCWA AMERICAN RIVER PUMP STATION AND RIVER RESTORATION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

NAME:	Kathryn White
ADDRESS:	372 Reservoir Dr
CITY/STATE/ZIP:	Orbun Ca 95603
BUSINESS AND/OR HOME PHONE/FAX:	
ORGANIZATION (IF APPLICABLE):	- Retired -
COMMENTS:	
<p>I am not in favor of more traffic on old section of Reservoir Dr. The traffic would be heavy on our street. A short cut for cars to the river.</p> <p>A</p> <p>We have all the school traffic & water agency now.</p> <p>We have no sidewalks, a lot of bikes, dogs on leashes, mothers with baby buggies, tame deer crossing the street. (Dangerous)</p> <p>We have new neighbours with small children now.</p> <p>We also have a lot of walkers on our street.</p>	

PLEASE USE THIS TO SUBMIT YOUR COMMENTS ABOUT THE DRAFT EIS/EIR. YOU CAN SEND ADDITIONAL COMMENTS TO:
DRAFT EIS/EIR COMMENTS, SURFACE WATER RESOURCES, INC., 2031 HOWE AVENUE, SUITE 110, SACRAMENTO, CA 95825
JUST FOLD THIS SELF-ADDRESSED SHEET INTO THIRDS, SEAL, STAMP, AND MAIL. THANK YOU.
☐ Please check here if you would like to be on the project mailing list.

A. Please refer to Master Response 3.1.6, Public River Access Features.